

REMARKS

Applicant respectfully requests reconsideration and allowance in view of the foregoing amendments and the following remarks. By this Amendment, claims 23-25 have been added. Upon entry of the Amendment, claims 1-25 will be pending in the Application. Claims 7-10, 17 and 22 had previously been identified by the Examiner as including allowable subject matter. However, the Examiner has reversed her position on at least claims 7-8, 10, 17 and 22 and now rejects claims 1-22 under 35 U.S.C. 101 as being directed to non-statutory matter.

***Rejections under 35 U.S.C. § 101***

In the office Action, the Examiner alleges that the presently claimed methods recite a test that is performed but no result is output or used and that no information is presented to a user and no physical transformation occurs outside the computer. The Examiner then rejects the claims as being non-statutory alleging that the claims do not produce a concrete tangible and useful result. Applicant disagrees.

Applicant respectfully submits that the Examiner's has improperly interpreted the language of the claims of the present invention.

Office personnel have the burden to establish a *prima facie* case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101. Further, when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection.

MPEP 2106. In the Office Action, the claims are mischaracterized as being limited to internal computer processes. More specifically, Applicant disagrees with the characterization of the claims as being a "test process" and the allegation that no result is output or used.

Regarding "test process," the independent claims recite a comparison step among other steps including acquiring and defining steps. Claim 1 recites a matching step and claims 11 and 18 include an iterative step for obtaining convergence to certain criteria, wherein the iterative step includes force definition, perturbing of point and recalculation of the perturbed points. Thus, it should be apparent that the claims are directed to more than a test step.

Furthermore, the various steps of the claims produce useful, concrete and tangible results. In the Office Action, the Examiner states that "[n]o information is presented to a user

nor does a physical transformation occur outside the computer as a result.” Office Action, mailed July 18, 2006 at page 3, lines 2-5. However, claims 1-10 and 18-22 do not require a computer and the claimed invention produces results used for purposes other than abstract manipulation of internal data. For example, claims 18-22 are directed to a method of measuring probe locations for use in a probe card analyzer system, where the probe card analyzer system analyzes characteristics of probe pins in probe cards.

Even accepting, *arguendo*, the mischaracterization of the claims presented in the Office Action, the claimed subject matter is statutory subject matter. The presently claimed processes involve the manipulation of measured point locations and matching the manipulated point locations to template point locations. The measured point locations may be provided in an image. Specification, page 1, lines 19-23. The measured point locations are compared to a template set of point locations and force field vectors are defined that perturb the measured point locations into alignment with the template point locations. *See* Specification at page 5, lines 19 *et seq.* The measured point locations can then be matched to corresponding locations in the template. Thus, the claimed inventions produce a set of measured points that have been aligned and matched to a set of template points.

The Background Of The Invention identifies various fields in which point matching is of importance. These fields include astronomy, biomedical imaging, animation, precision instrument testing and calibration, and other technologies. Specification, page 1, lines 14-16. The Application further teaches that the object to be manipulated in a novel manner by the present invention may be optical or image data acquired by a camera or other imaging apparatus. Specification, page 1, lines 19-23. Thus, the results produced are typically in the form of a modified image. Examples of such results are reproduced in Figs. 3-14. *See also*, Specification, page 10, line 16 – page 11, line 2.

The results produced by the presently claimed inventions are useful, concrete and tangible. The point matching methods provided in the present application permit matching and alignment of a set of points in an image to a known template set of points. Thus, for example, individual points in the image can be more easily identified based on their location relative to the template. In the field of astronomy, an image of point sources of light (e.g. stars) taken at a first time of day and first day of year could be matched to an image of a known star field, captured at a second time of day on a second day of year, thereby allowing identification of specific stars in the image. Applicant respectfully submits that the methods claimed in the present invention constitute a practical application of algorithms, formulae and

or calculations because they produce a useful, concrete and tangible result that could be used for reporting purposes and even accepted and relied upon by interested persons in the field. *Compare with State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601, as cited by MPEP 2106.

Therefore, Applicant respectfully submits that the claims are improperly rejected under 35 U.S.C. §103 and the rejections should be withdrawn.

***New Claims***

Claims 23-25 are new. Claim 23 includes a restatement of certain elements of independent claim 1 such that certain intermediate results are presented more explicitly. Claim 24 includes elements also found in claims 3 and 5 and claim 25 includes elements found in claims 7 and 8. The subject matter of claims 23-25 is fully supported in the Specification. No new matter is added to the Application.

**CONCLUSION**

Based at least upon the foregoing Remarks, Applicants respectfully submit that all the pending claims are allowable, and that the present application is currently in condition for allowance. The Examiner is encouraged to contact the undersigned at 858-509-4007 if it is believed that a discussion may advance the prosecution of this case. Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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